

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2604057/MJC	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).	
International Application No. PCT/AU2003/000015	International Filing Date (day/month/year) 8 January 2003	Priority Date (day/month/year) 8 January 2002
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ C08F 2/44; C08K 3/22		
Applicant COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION et al		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.																
2.	This REPORT consists of a total of 3 sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of sheet(s).																
3.	This report contains indications relating to the following items: <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 5%;">I</td> <td><input checked="" type="checkbox"/> Basis of the report</td> </tr> <tr> <td>II</td> <td><input type="checkbox"/> Priority</td> </tr> <tr> <td>III</td> <td><input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td>IV</td> <td><input type="checkbox"/> Lack of unity of invention</td> </tr> <tr> <td>V</td> <td><input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td>VI</td> <td><input type="checkbox"/> Certain documents cited</td> </tr> <tr> <td>VII</td> <td><input type="checkbox"/> Certain defects in the international application</td> </tr> <tr> <td>VIII</td> <td><input type="checkbox"/> Certain observations on the international application</td> </tr> </table>	I	<input checked="" type="checkbox"/> Basis of the report	II	<input type="checkbox"/> Priority	III	<input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	IV	<input type="checkbox"/> Lack of unity of invention	V	<input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	VI	<input type="checkbox"/> Certain documents cited	VII	<input type="checkbox"/> Certain defects in the international application	VIII	<input type="checkbox"/> Certain observations on the international application
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Date of submission of the demand 8 August 2003	Date of completion of the report 20 April 2004
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer N.L. KING Telephone No. (02) 6283 2150

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/AU2003/000015

I. Basis of the report

1. With regard to the elements of the international application:*
- ☒ the international application as originally filed.
- ☐ the description, pages , as originally filed,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the claims, pages , as originally filed,
pages , as amended (together with any statement) under Article 19,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the drawings, pages , as originally filed,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the sequence listing part of the description:
pages , as originally filed
pages , filed with the demand
pages , received on with the letter of
2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language which is:
- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).
3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished
4. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.
5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/AU2003/000015

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-18, 20, 21	YES
	Claim 19	NO
Inventive step (IS)	Claims 1-18, 20, 21	YES
	Claim 19	NO
Industrial applicability (IA)	Claims 1-21	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

D1 US 4269760

D2 US 4123396

NOVELTY(N) Claims 1-21

Claim 19 defines polymeric beads with amine groups, there being magnetic particles dispersed in the polymer matrix. The magnetic particles are said to be "dispersed substantially uniformly" in the polymer matrix. Claim 1 defines a process for preparing polymeric beads incorporating magnetic particles. The process includes the use of an agent to disperse magnetic particles in the organic phase.

Closely-related art appears in each of the above citations. Example 10 of D1 describes the preparation of polymeric beads containing particles of magnetic aluminium-nickel-cobalt alloy. Amino groups are provided by including diethylaminoethyl methacrylate as one of the monomers. In your response you say an agent for dispersing the magnetic particles is not used in this citation. However, claim 19 is not restricted to any particular method of preparation and there is no mention of a dispersing agent in the claim. In Example 10, the use of Aerosil as a dispersion stabilizer and the high shear caused by stirring at 3000 rpm during polymerisation would both be expected to disperse the magnetic particles "substantially uniformly" in the polymer matrix as required by claim 19. In your response you also say the amine monomers are present in only small amount in the citation. However, claim 19 does not require the number of amine groups to be greater than any particular amount.

Again, in Example 1 of D2, magnetic metals are incorporated in polymeric beads formed from bisacrylamide and vinyl-pyridine the latter being one of the monomers said to be suitable for the present process at page 9 line 29 of the specification. In D2 incorporation of magnetic metals is by impregnation of the microspheric polymeric beads with an aqueous solution of metal salt (column 2 lines 63-67) which results in uniform distribution of metal atoms (column 2 lines 34-36). At column 3 lines 3-6 it is pointed out that metal particles are "dispersed throughout the microsphere". Consequently, they are not merely located "on or near the surface" as submitted in your response. You also say there is no dispersing agent disclosed in the citation. However, as mentioned above, claim 19 also makes no mention of a dispersing agent.

Consequently, claim 19 lacks novelty when compared to each of D1 and D2.

However, the methods used in D1 and D2 to prepare the polymeric beads differ from the process defined in claim 1. In particular, no dispersing agent is used in D1 or D2. Consequently, claims 1-18, 20 and 21 are not deprived of novelty by these citations.

INVENTIVE STEP(IS) Claims 1-21

In view of the above, claim 19 also lacks an inventive step when compared to D1 and D2. However, it would not be obvious to a person skilled in the art to prepare polymeric beads with magnetic particles by the process defined in claim 1. Accordingly, claims 1-18, 20 and 21 involve an inventive step.